

IN THE CLAIMS:

- 1 1. (Original) A semiconductor light emitting device comprising:
2 a base substrate;
3 a multilayer epitaxial structure that includes a first conductive layer, a second
4 conductive layer and a light emitting layer that is formed between the first conductive layer and
5 the second conductive layer, the multilayer epitaxial structure being formed on the base substrate
6 in such a manner that the first conductive layer is positioned closer to the base substrate than the
7 second conductive layer is; and
8 a phosphor film that covers a main surface of the multilayer epitaxial structure
9 which faces away from the base substrate, and every side surface of the multilayer epitaxial
10 structure from a layer including the main surface to include at least the light emitting layer.
- 1 2. (Original) The semiconductor light emitting device of Claim 1, wherein
2 the multilayer epitaxial structure is epitaxially grown on the base substrate.
- 1 3. (Original) The semiconductor light emitting device of Claim 2, wherein
2 the multilayer epitaxial structure further includes a reflective layer which is
3 formed between the base substrate and the first conductive layer.
- 1 4. (Original) The semiconductor light emitting device of Claim 3, wherein
2 the reflective layer is made of an AlGaN semiconductor.
- 1 5. (Original) The semiconductor light emitting device of Claim 2, further
2 comprising:
3 a first electrode that is formed on the first conductive layer;

4 a second electrode that is formed on the second conductive layer;

5 a first power supply terminal and a second power supply terminal that are formed

6 on a main surface of the base substrate which faces away from the multilayer epitaxial structure;

7 a first conductive member including a first through hole that is provided in the

8 base substrate, and electrically connecting the first electrode and the first power supply terminal;

9 and

10 a second conductive member including a second through hole that is provided in

11 the base substrate, and electrically connecting the second electrode and the second power supply

12 terminal.

1 6. (Original) The semiconductor light emitting device of Claim 5, wherein

2 the multilayer epitaxial structure is formed on the base substrate leaving a space

3 along each edge of a main surface of the base substrate which faces the multilayer epitaxial

4 structure, and

5 the first through hole and the second through hole are provided in a peripheral

6 portion of the base substrate, the peripheral portion corresponding to the space.

1 7. (Original) The semiconductor light emitting device of Claim 2,

2 the base substrate is made of one of SiC, AlN, GaN, BN, and Si.

1 8. (Original) The semiconductor light emitting device of Claim 2, wherein

2 the main surface of the multilayer epitaxial structure which faces away from the

3 base substrate is uneven so as to improve light extraction efficiency.

1 9. (Original) The semiconductor light emitting device of Claim 2, wherein
2 light emitted from the light emitting layer has a wavelength component within a
3 range of 380 nm to 780 nm.

1 10. (Original) The semiconductor light emitting device of Claim 1, wherein
2 the multilayer epitaxial structure is first epitaxially grown on a single-crystal
3 substrate, and then transferred to the base substrate.

1 11. (Original) The semiconductor light emitting device of Claim 10, further
2 comprising:
3 a metal reflective film that is sandwiched between the multilayer epitaxial
4 structure and the base substrate.

1 12. (Original) The semiconductor light emitting device of Claim 10, wherein
2 the first conductive layer is a p-type semiconductor layer, and
3 the second conductive layer is an n-type semiconductor layer.

1 13. (Original) The semiconductor light emitting device of Claim 12, wherein
2 a main surface of the n-type semiconductor layer which faces away from the light
3 emitting layer is uneven so as to improve light extraction efficiency.

1 14. (Original) The semiconductor light emitting device of Claim 1, wherein
2 the multilayer epitaxial structure is shaped as a cylinder having a substantially
3 circular or N-sided polygonal cross-section, where N is an integer equal to or larger than five.

1 15. (Original) The semiconductor light emitting device of Claim 14, wherein
2 the phosphor film is applied at a substantially same thickness.

1 16. (Original) The semiconductor light emitting device of Claim 14, wherein
2 the main surface of the base substrate which faces the multilayer epitaxial
3 structure is rectangular.

1 17. (Original) The semiconductor light emitting device of Claim 14, wherein
2 the multilayer epitaxial structure further includes a light reflective layer which is
3 formed between the first conductive layer and the base substrate.

1 18. (Original) The semiconductor light emitting device of Claim 14, wherein
2 the multilayer epitaxial structure is epitaxially grown on the base substrate.

1 19. (Original) The semiconductor light emitting device of Claim 14, wherein
2 the multilayer epitaxial structure is divided into a plurality of portions by a
3 division groove that reaches the base substrate, the plurality of portions being a plurality of
4 independent light emitting elements.

1 20. (Original) The semiconductor light emitting device of Claim 19, wherein
2 in each of the plurality of independent light emitting elements,
3 a first electrode is formed on a part of a main surface of the first conductive layer,
4 the part being created by partially removing the second conductive layer and the light emitting
5 layer, and a second electrode is formed on a main surface of the second conductive layer, and
6 the plurality of independent light emitting elements are connected with each other

7 in series in such a manner that a first electrode of one independent light emitting element is
8 connected to a second electrode of another independent light emitting element using a wiring
9 formed by a thin metal film.

1 21. (Original) The semiconductor light emitting device of Claim 20, wherein
2 the light emitting layer included in each independent light emitting element has a
3 substantially same area.

1 22.-28 (Cancelled)

1 29. (New) The semiconductor light emitting device of Claim 1 wherein the phosphor
2 film is formed of $(\text{Sr}, \text{Ba})_2 \text{SiO}_4:\text{Eu}^{2+}$.

1 30. (New) The semiconductor light emitting device of Claim 29 wherein a thickness
2 of the phosphor film is approximately 50 μm .

1 31. (New) The semiconductor light emitting device of Claim 1 wherein the epitaxial
2 structure has an uneven p-electrode surface as a first conductive layer.

1 32. (New) The semiconductor light emitting device of Claim 31 wherein a plurality
2 of depressions is formed on a surface of the p-electrode surface to improve light extraction
3 efficiency.

1 33. (New) The semiconductor light emitting device of Claim 31 wherein a Ni/An
2 thin film and an ITO transparent electrode form the p-electrode.

1 34. (New) The semiconductor light emitting device of Claim 1 includes a hole in the
2 base substrate.